

transmitted from the wireless communication antenna 48 to be received by the wireless communication terminal 46.

[0055] The front camera 56 is for capturing an image in the front of the tractor 1. The rear camera 57 is for capturing an image in the rear of the tractor 1. The front camera 56 and the rear camera 57 are attached to the roof 5 of the tractor 1. Video data captured by the front camera 56 and the rear camera 57 is transmitted from the wireless communication antenna 48 to the wireless communication terminal 46 by the wireless communication unit 40. The wireless communication terminal 46 that has received the video data displays the contents on the display 31.

[0056] The above-described vehicle speed sensor 53 is for detecting the vehicle speed of the tractor 1 and is provided on an axle between the front wheels 7 and 7, for example. The data of a detection result obtained by the vehicle speed sensor 53 is output to the control unit 4. Note that it is also possible that the vehicle speed of the tractor 1 is not detected by the vehicle speed sensor 53 but is calculated based on the moving time period of the tractor 1 in a predetermined distance based on the positioning antenna 6. The steering angle sensor 52 is a sensor that detects the steering angle of the front wheels 7 and 7. In the present embodiment, the steering angle sensor 52 is provided on an illustration-omitted kingpin provided on the front wheels 7 and 7. The data of a detection result obtained by the steering angle sensor 52 is output to the control unit 4. Note that a configuration in which the steering angle sensor 52 is provided on the steering shaft is also possible.

[0057] As illustrated in FIG. 3, the wireless communication terminal 46 includes the display 31 and the touchscreen 32. The wireless communication terminal 46 is a tablet terminal but can be a smartphone, a laptop PC, or the like. Note that, in a case of making the tractor 1 autonomously travel in a state where the user is on board the tractor 1, it is also possible that the same function as the wireless communication terminal 46 is provided on the tractor 1 side (for example, the control unit 4). The user can refer to and check the information displayed on the display 31 of the wireless communication terminal 46 (for example, information from the front camera 56, the rear camera 57, the vehicle speed sensor 53, etc.). In addition, the user can operate the above-described touchscreen 32, an illustration-omitted hardware key, or the like, so as to transmit a control signal (for example, a pause signal, etc.) for controlling the tractor 1 to the control unit 4 of the tractor 1.

[0058] The wireless communication terminal 46 includes an illustration-omitted arithmetic device such as a CPU, a storage device such as a non-volatile memory, an input-output unit, etc. The storage device stores various kinds of programs, data related to travel paths, etc. The arithmetic device is capable of reading various kinds of programs from the storage device and executing the programs. By the cooperation of the above-described hardware and software, the wireless communication terminal 46 can be operated as the display control unit 33, the farm field acquisition unit 34, the travel path creation unit 35, the reference auxiliary line creation unit (auxiliary line creation unit) 36, the adjacent auxiliary line creation unit (auxiliary line creation unit) 37, the auxiliary line selection unit 38, and the selection processing unit 39 (specific processing will be described later).

[0059] The display control unit 33 creates display data to be displayed on the display 31 and controls the display contents as appropriate. For example, the display control

unit 33 displays a predetermined monitoring screen, instruction screen, or the like on the display 31 while the tractor 1 is caused to autonomously travel along a travel path.

[0060] The farm field acquisition unit 34 acquires the position and shape of a target farm field in which the tractor 1 performs autonomous traveling from the storage device. The position and shape of the farm field are created based on the transition of the position information of the positioning antenna 6 when the tractor 1 is caused to travel along the periphery of the farm field. Note that it is also possible that, without causing the tractor 1 to actually travel, the user designates a range on a map displayed on the display 31 so that the position and shape of the farm field are created, for example. Further, although the information related to the farm field is stored in the wireless communication terminal 46 in the present embodiment, it is also possible that the information related to the farm field is stored in a server that is physically distant from the wireless communication terminal 46. In this case, the farm field acquisition unit 34 acquires information related to the farm field from this server.

[0061] Here, with reference to FIG. 4, a brief explanation is given of the farm field. The farm field includes a work area and a headland area. The work area is located in the central part of the farm field and is an area for performing work (the area of which the main purpose is to perform work). The headland area is located outside the work area and is an area to be used for properly performing work in the work area. For example, the headland area is used for moving the tractor 1 that has entered the farm field to the start position of work in the work area. In addition, the headland area is also used for turning the tractor 1 that has travelled straight in the work area. Further, in the present embodiment, the work is performed not only on the work area but also on the headland area. Specifically, the tractor 1 travels in the work area to perform the work, and then the tractor 1 travels in the headland area to perform the work.

[0062] The travel path creation unit 35 creates a travel path for performing the work in the work area. In the present embodiment, the travel path creation unit 35 creates the straight paths 71 and the turning paths 72 illustrated in FIG. 4, based on various kinds of settings made by the user using the wireless communication terminal 46. The straight paths 71 are parallel to one side (short side) of the farm field peripheral edge and the work area peripheral edge. The arrangement interval of the straight paths 71 corresponds to the value obtained by subtracting the overlap amount (the length indicating how much adjacent work ranges overlap in the vehicle width direction) from the work width W1 or the value obtained by adding the work interval (the length indicating how much interval is provided between adjacent work ranges in the vehicle width direction) to the work width W1. Further, a turning path 72 is a path connecting straight paths 71 to each other. Although a turning path 72 connects adjacent straight paths 71 to each other in the present embodiment, it is also possible that a turning path 72 connects distant straight paths 71 to each other. Further, a turning path 72 of the present embodiment is a path on which the tractor 1 is caused to turn around by making a turn by 90 degrees, then traveling backward, then switching to forward traveling, and then turning again by 90 degrees, so that the tractor 1 reaches the next straight path 71. However, instead of this type of turning path 72, it is also possible to create a turning path on which the tractor 1 is caused to turn